

# A contribution to the knowledge of Oriental Bruchidae<sup>1</sup>

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## INTRODUCTION

The systematic studies of the family Bruchidae have been rather neglected in this country. The literature is scattered and the National Collections of the Zoological Survey of India, Calcutta, Indian Agricultural Research Institute, New Delhi and the Forest Research Institute, Dehra Dun, are rather poor in their respective holdings. Pic (1898-1938) has described a large number of species from India but barring a few species, all these are deposited either in the British Museum (Natural History), London or Museum D'Histoire Naturelle, Paris or other places.

Species of this family are known to do considerable damage to pulses, ground nuts, tamarind seeds and pods of various leguminous plants, in storage and in the field. Lefroy & Ghosh (1921) recorded 3 species, as being economically important in the storage of pulses and stated 'The pulse beetles have not yet been fully worked out. It is not known how many species of them, there are in all, in this country'.

The present checklist reveals the presence of at least 13 cosmopolitan species occurring in this country, in the total of 88 species that are listed here.

For the convenience of identification, a key to the subfamilies and genera has been provided.

One new name *Bruchidius nilue* has been proposed for *Bruchus stevensi* Pic (1938) a name which is preoccupied vide *Bruchus urbans* var. *stevensi* Pic, 1928. Twenty-three species have been assigned to their current genera and indicated as 'Comb. Nov.'. This assignment is mostly based on their published descriptions, many of which are however very poor to place all of them in the current genera; such species have been retained in original genera, till an opportunity arises to ex-

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amine 'Type' specimens or some other authentically determined material.

It is hoped that this contribution will stimulate taxonomic studies on this neglected though important group and encourage the use of current scientific names. Thomas (1967, Cyclostyled) in 'some Insect Pests found in Ware House and Sources of Infestation' mentions nine species but none of them has been referred to its current scientific name.

I am thankful to the head of the Entomology Division of Indian Agricultural Research Institute, New Delhi, to the Forest Entomologist, Forest Research Institute and College, Dehra Dun, and to the Head of Zoology Department, Punjab University for their kind help in supplying me the list of species in their respective collections, I am also thankful to Prof. Balachovsky, Director, Laboratoire, D'Entomologie, Muséum National D'Histoire Naturelle, Paris, for kindly permitting me to examine some of the 'Type' specimens in Pic's Collections and for photostat copies of his various papers.

Species present in the collections of various institutions have been indicated below the distribution in the abbreviated form, I.A.R.I., F.R.I. & P.U. for Indian Agricultural Research Institute, Forest Research Institute & Punjab University respectively.

I am also thankful to Dr. A. P. Kapur, Director, Zoological Survey of India for his kind interest and the collections present in the department have been indicated by the abbreviation, 'Z.S.I.' I am also thankful to Dr. Ramdass Menon of the Indian Agricultural Research Institute, New Delhi for going through the paper and for very useful suggestions.

#### A. KEY TO THE SUBFAMILIES OF BRUCHIDAE FROM ORIENTAL REGION

1. Hind tibiae with two mobile spurs; scutellum triangular; body almost rounded, scarcely longer than broad; eyes a little protruding; head not or only slightly constricted behind  
Subfam. (3) *Amblycerinae*  
Hind tibiae without mobile spurs at apex; scutellum quadrangular or indistinct; head usually with eyes protruding and constricted behind 2
2. Hind tibiae not or only slightly curved at base      Subfam. (1) *Bruchinae*  
Hind tibiae strongly and evenly curved, the inner apical angle produced like a spur (hind femora strongly enlarged)  
Subfam. (2) *Pachymerinae*

#### B. KEY TO THE GENERA OF SUBFAMILY BRUCHINAE KNOWN FROM THE ORIENTAL REGION

1. Pronotum transverse; sides of pronotum with a small notch about the middle  
Pronotum conically narrowed anteriorly, sides straight or convex but without a lateral notch  
(1) *Bruchus* 2

2.	Hind femora without any furrow at the lower margin, with or without a tooth at inner edge	3
	Hind femora wholly or partly furrowed at lower margin	4
3.	Basal part of pronotum distinctly emarginate, longitudinally sulcate with two white pubescent tubercles at the middle of posterior margin	(3) <i>Callosobruchus</i>
	Basal part of pronotum not emarginate, without any white pubescent tubercles	(2) <i>Bruchidius</i>
4.	Hind femora quite narrow	5
	Hind femora strongly thickened	6
5.	Hind femora with a pointed tooth followed by two smaller teeth or tubercles on inner side	(5) <i>Acanthescelides</i>
	Hind femora not very strongly dentate	(6) <i>Conicobruchus</i>
6.	Hind femora sharply ridged on each side of furrow/sulcus but without any single prominent projection on it	<i>Sulcobruchus</i> <sup>1</sup>
	Hind femora with many teeth on the side of the furrow, first tooth strong followed by 2-4 denticles/serrations	(4) <i>Specularius</i>

C. KEY TO THE GENERA OF SUBFAMILY PACHYMERINAE KNOWN FROM THE ORIENTAL REGION

1.	Head elongate; eyes emarginate for half their length; elytra not covering the base of pygidium	(9) <i>Caryopemon</i>
	Head short; eyes emarginate for $\frac{1}{4}$ th or less of its length and prominent; elytra covering the base of pygidium	2
2.	Pronotum with carinae and impressed lines complete; eyes distinctly emarginate but not exceeding $\frac{1}{4}$ th of their length; tarsal joints 1 and 2 triangularly expanded (hind femora with large tooth near base, margin before it not serrate)	(7) <i>Pachymerus</i>
	Pronotum with carinae and impressed lines obsolete on the sides anteriorly; eyes hardly emarginate; tarsal joints 1 and 2 may be only little expanded at apex	(8) <i>Caryedon</i>

D. KEY TO THE GENERA OF SUBFAMILY AMBLYCYERINAE KNOWN FROM THE ORIENTAL REGION

1.	Anterior coxae quite contiguous at the tip; claws absolutely simple or minute but not lobed at base	(11) <i>Zabrotes</i>
	Anterior coxae more or less separated; claws distinctly	(10) <i>Spermophagus</i>

<sup>1</sup> Likely to occur in India.

## Family BRUCHIDAE

## Subfamily Bruchinae

Genus 1. *Bruchus* LinnaeusType species—*Bruchus pisorum* (Linnaeus)1. *Bruchus affinis* Frolich

*Bruchus affinis* Frolich, 1799, *Naturforsch.*, 28:55. Allard, 1895, *Bull. Soc. ent. Belg.*, 39:225. Pic, 1913, *Coleopt. Cat.*, 26:13. Fletcher & Ghosh, 1921, *Proc. 3rd. ent. meeting Pusa*, 2:721. Hoffmann, 1945, *Fn. France*, 44:44. Luk Yanovika & Ter Minasyan, 1957, *Fn. USSR, Coleoptera: Bruchidae*, 24 (1): 98. Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:144.

*Bruchus flavimanus* Boheman, 1833, in Schonherr, *Genera et Species Curculionidum*, 1:59.

*Bruchus obscuritarsis* Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 39:244 (1873).

*Bruchus ruthenicus* Beker, 1892, *Bull. Soc. Imp. Nat. Moscou*, 1892:69.

*Bruchus monticola* Bedel, 1901, *Fauna des Coleopteres du bassin de la Seine*, 5:348.

Hosts—*Pisus arvense*, (Peas of all kinds).

Distribution—Cosmopolitan.

I.A.R.I., F.R.I.

2. *Bruchus bilineatopygus* Pic

*Bruchus bilineatopygus* Pic, 1938, *Ann. Mag. nat. Hist.*, (11)2:399, (Dehra Dun—Holotype in Brit. Mus. and paratypes in Pic coll., Paris Mus.).

Distribution—India.

F.R.I.

3. *Bruchus caeruleus* Champion

*Bruchus caeruleus* Champion, 1919, *Ent. Mon. Mag.*, 55:244.

Distribution—India.

4. *Bruchus diversicolor* Pic

*Bruchus diversicolor* Pic, 1913, *Echange*, 1913:110 (nom. nov.). Pic, 1913, *Coleopt. Cat.*, 26:24.

*Bruchus versicolor* Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 39:244 (India or—name preoccupied).

Distribution—?India.

5. *Bruchus dolichosi* Gyllenhal

*Bruchus dolichosi* Gyllenhal, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:5 (Nepal). Pic, 1913, *Coleopt. Cat.*, 26:24.

Distribution—Nepal.

6. *Bruchus dorsalis* Fahrreus

*Bruchus dorsalis* Fahrreus, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:98 (India, Bengal). Heyden, 1879, *Deutsche Ent. Zeit.*, 23:357. Roelofe, 1880, *Ann. Soc. ent. Belg.*, 24:30. Schilsky, 1905, *Die Käfer Euro-*

*pas*, 41 no. 93. Pic, 1913, *Coleopt. Cat.*, 26:24.  
*Distribution*—India, Japan, China.

#### 7. **Bruchus griseosuturalis** Pic

*Bruchus griseosuturalis* Pic, v932, *Ann. Mag. nat. Hist. Lond.*, (10)9:331,  
 (Coorg: Fraserpeta—Brit. Mus.).  
*Distribution*—India.

#### 8. **Bruchus incretus** Walker

*Bruchus incretus* Walker, 1859, *Ann. Mag. nat. Hist. Lond.*, (3)3:261. (Ceylon  
 —Brit. Mus.).

*Distribution*—Sri Lanka.

#### 9. **Bruchus indigoferae** Gyllenhal

*Bruchus indigoferae* Gyllenhal, 1833, in Schonherr, *Genera et Species Curculionidum*, 1:34 (India Orientalis). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:226  
 (Belgaum). Pic, 1913, *Coleopt. Cat.*, 26:29.

*Host*—*Indigofera tinctoria*.

*Distribution*—India.

F.R.I.

#### 10. **Bruchus kashmiricus** Pic

*Bruchus kashmiricus* Pic, 1929, *Echange*, 45:4 (Kashmir—Paris Mus.).  
*Distribution*—India.

#### 11. **Bruchus lineolatus** Motschulsky

*Bruchus lineolatus* Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 46:225  
 (India Or.). Pic, 1913, *Coleopt. Cat.*, 26:31.

*Distribution*—India.

#### 12. **Bruchus matheroni** Pic

*Bruchus matheroni* Pic, 1913, *Mélonges exotico-entomologiques*, 6:14 (Maharashtra: Bombay: Matheran).

*Distribution*—India.

#### 13. **Bruchus maculothorax** Pic

*Bruchus maculothorax* Pic, 1928, *Ann. Mag. nat. Hist. Lond.*, (10)1:298. (U.P.:  
 Gonda, Janakpur—Paris Mus.). Mukerji & Chatterji, 1951, *Indian J. ent.*,  
 13:14, pl. iv, fig. 7 (genitalia).

*Host*—*Dalbergia paniculata* (seeds).

*Distribution*—India.

I.A.R.I.

#### 14. **Bruchus mendosus** Gyllenhal

*Bruchus mendosus* Gyllenhal, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:72 (Bengal). Fahrreus, *Ofv. Vet. Akad. Forh.*, 1871:449. Allard, 1895, *Ann. Soc. ent. Belg.*, 39:225 (Kanara, Belgaum.). Pic, 1923, *Coleopt.*

*Cat.*, 26:35. Mukerji and Chatterji, 1951, *Indian J. ent.*, 13:13-14, pl. iv, figs. 3-6 (genitalia).

*Distribution*—India.

I.A.R.I., F.R.I.

### 15. **Bruchus minimus** Motschulsky

*Bruchus minimus* Motschulsky, 1858, *Etudes Entomologiques*, 7:97 (Burma).

Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 46:217 (Key to spp.).

Pic, 1913, *Coleopt. Cat.*, 26:35 (Burma, India).

*Distribution*—Burma, India.

### 16. **Bruchus nigripennis** Allard

*Bruchus nigripennis* Allard, 1895, *Ann. Soc. ent. Belg.*, 39:226 (Himachal Pradesh: Chamba). Pic, 1913, *Coleopt. Cat.*, 26:37.

*Distribution*—India.

### 17. **Bruchus nigrosinuatus** Allibart

*Bruchus nigrosinuatus* Allibart, 1847, *Rev. Zoologique*, 1847:16 (India). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:226 (Belgaum). Pic, 1913, *Coleopt. Cat.*, 26:37.

*Distribution*—India.

### 18. **Bruchus pisorum** (Linnaeus)

*Dermestes pisorum* Linnaeus, 1758, *Systema naturae*, ed. 10:356 (America).

*Bruchus pisorum* Pic, 1913, *Coleopt. Cat.*, 26:41. Hoffmann, 1945, *Fn. France*, 44:118. Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:9, pl. ii, fig. 5 (genitalia). Luk Yanovika & Ter Minasyan, 1957, *Fn. USSR. Col. Bruchidae*, 24:93, fig. 81-82. Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:148.

*Bruchus salicis* Scopoli, 1763, *Entomologia Carnilica*, Vindobonae, 1763:22.

*Bruchus pisi* Linnaeus, 1767, *Systema naturae*, ed. 12, 1:604.

*Bruchus crucifer* Geoffroy, 1785, in Fourcroy, *Entomologia Parisiensis Catalogue Insectorum*, 1:112.

*Bruchus salicis* var. *sparsus* Fabricius, 1801, *Systema Eleutherorum*, 2:398.

*Bruchus salicis* var. *intermedius* Motschulsky, 1854, *Etudes Entomologiques*, 5:16.

*Bruchus lunaris* Rey, 1893, *Echange*, 9:3.

*Bruchus lunaris* var. *unifasciatus* Rey, 1893, *Echange*, 9:3.

Hosts—*Vicia* spp.; *Cassia fistula* Linn., *Pisum sativum* Linn.

*Distribution*—Cosmopolitan.

I.A.R.I., P.U., F.R.I.

### 19. **Bruchus ochreatus** Motschulsky

*Bruchus ochreatus* Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 46:210 (India Or.). Pic, 1913, *Coleopt. Cat.*, 26:38.

*Distribution*—India.

### 20. **Bruchus pruiniius** Horn

*Bruchus pruiniius* Horn, 1873, *Trans. Amer. ent. Soc.*, 4:324 (Mexico). Sharp,

1885, *Biol. Centr. Amer. Col.*, 5:453. Pic, 1913, *Coleopt. Cat.*, 26:38.  
*Distribution*—India.

**21. *Bruchus schroderi* Pic**

*Bruchus schroderi* Pic, 1930, *Echange.*, 46:6 (Germany).

*Distribution*—Germany, India.

F.R.I.

**22. *Bruchus sparsmaculatus* Pic**

*Bruchus sparsmaculatus* Pic, 1913, *Echange*, 1913:144.

*Distribution*—India.

F.R.I.

**23. *Bruchus trifasciatus* Motschulsky**

*Bruchus trifasciatus* Motschulsky, 1866, *Bull. Soc. Imp. Nat. Moscou*, 39:405  
 (Ceylon). Pic, 1913, *Coleopt. Cat.*, 26:53.

*Distribution*—India.

**24. *Bruchus walkeri* Pic**

*Bruchus walkeri* Pic, 1912, *Echange*, 28:92 (nom. nov.); Pic, 1913, *Coleopt. Cat.*, 26:57.

*Bruchus figuratus* Walker, 1859, *Ann. Mag. nat. Hist. Lond.*, (3)3:261 (Ceylon)  
 nec Gyllenhal, 1839:12.

*Distribution*—Ceylon.

F.R.I.

Genus 2. *Bruchidius* Schilsky (1905)

Type species—*Bruchidius quinqueguttatus* (Olivier)

**25. *Bruchidius andrewesi* (Pic)**

*Bruchus andrewesi* Pic, 1932, *Ann. Mag. nat. Hist.*, (10)9:330. (Annamalais—  
 Brit. Mus. & Paris Mus.).

*Bruchidius andrewesi*, Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:14, pl. v,  
 figs. 1-3 (genitalia).

Host—*Acacia leucophloea*

*Distribution*—India.

I.A.R.I.; P.U.; F.R.I.

**26. *Bruchidius angustifrons* Schilsky**

*Bruchidius angustifrons* Schilsky, 1905, *Die Kafer Europas*; 41:52 (Egypt).

Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:160-161, figs. 55, 67.

*Bruchus angustifrons*, Pic, 1913, *Coleopt. Cat.*, 26:15.

*Distribution*—Egypt, India.

**27. *Bruchidius cinereovarius* (Motschulsky) Comb. Nov.**

*Bruchus cinereovarius* Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 46:  
 224 (1973) (India Or.).

*Distribution*—? India.

28. **Bruchidius costulatus** (Pic), Comb. Nov.

*Bruchus costulatus* Pic, 1932, *Ann. Mag. nat. Hist. Lond.*, (10)9:330 (Coorg: Fraserpet—Brit. Mus.).

*Distribution*—India.

29. **Bruchidius decretus** (Walker) Comb. Nov.

*Bruchus decretus* Walker, 1859, *Ann. Mag. nat. Hist. Lond.*, (3)3:261 (Ceylon—Brit. Mus.). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:227. Pic, 1913, *Coleopt. Cat.*, 26:23.

*Distribution*—India, Ceylon.

30. **Bruchidius dilataticornis** (Pic) Comb. Nov.

*Bruchus dilataticornis* Pic, 1928, *Bull. Soc. ent. Fr.*, 1928:315 (Nilgiri hills—Brit. Mus.).

*Distribution*—India.

31. **Bruchidius gardneri** (Pic) Comb. Nov.

*Bruchus gardneri* Pic, 1938, *Ann. Mag. nat. Hist. Lond.*, (11)2:400 (Dehra Dun—Holotype in Brit. Mus. & Paratypes in Paris Mus.).

*Distribution*—India.

F.R.I.

32. **Bruchidius kashmirensis** (Pic) Comb. Nov.

*Bruchus biguttatus* Blanchard, 1844, *Ann. Soc. ent. Fr.*, (Bull.). (2)2:27 nec Olivier, 1795. (Kashmir).

*Bruchus kashmirensis* Pic, 1912, *Echange*, 28:92 (nom. nov.). Pic, 1913, *Coleopt. Cat.*, 26:17.

*Distribution*—India.

33. **Bruchidius latior** (Pic) Comb. Nov.

*Bruchus latior* Pic, 1932, *Ann. Mag. nat. Hist.*, (10)9:330 (Barany—Brit. Mus.).

*Distribution*—India.

34. **Bruchidius maculipyga** (Champion) Comb. Nov.

*Bruchus maculipyga* Champion, 1931, *Ent. Mon. Mag.*, 55:245. Mukerji & Chatterji, 1951, *Indian J. ent.* 13:11, pl. 111, figs. 10-13 (genitalia).

Host—Pods of *Acacia pennanta*.

*Distribution*—India.

P.U.; F.R.I.

35. **Bruchidius minutissimus** (Motschulsky) Comb. Nov.

*Bruchus minutissimus* Motschulsky, 1858, *Etudes Entomologiques*, 7:98 (Agra). Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscow*, 46:215 (1873). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:227. Pic, 1913, *Coleopt. Cat.*, 26:35. Mathur and Singh, 1959, *Indian For. Bull.* 171(4):29.

Host—Seeds of *Desodium triquetrum*.

*Distribution*—India.

I.A.R.I.; F.R.I.

36. **Bruchidius minutus** (Fabricius) Comb. Nov.

*Bruchus minutus* Fabricius, 1801, *Syst. Eleutherorum*, 2:401. Gyllenhal, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:56. Pic, 1913, *Coleopt. Cat.*, 26:35 (Central & S. America).

*Pachybruchus minutus* Sharp, 1885, *Biol. Centr. Amer. Col.*, 5:487.

*Distribution*—Cosmopolitan.

P.U.

37. **Bruchidius nalandus** (Pic) Comb. Nov.

*Bruchus nalandus* Pic, 1927, *Mel. exot. ent.*, 48:12 (Ceylon). Mathur & Singh, 1959, *Indian For. Bull.*, 171(4):28.

Host—*Desodium pulchellum*.

*Distribution*—Ceylon.

F.R.I.

38. **Bruchidius oocularis** (Pic) Comb. Nov.

*Bruchus oocularis* Pic, 1932, *Ann. Mag. nat. Hist.*, (10)9:331 (Madras: Salem; Jawalagiri—Paris Mus.).

*Distribution*—India.

39. **Bruchidius pauper** (Bohemann) Comb. Nov.

*Bruchus pauper* Bohemann, 1829, *Nouv. Mem. Soc. Nat. Moscou*, 1:115. Allard, 1868, *Ann. Soc. ent. Belg.*, 11:99. Pic, 1913, *Coleopt. Cat.*, 26:40.

*Distribution*—Central & South Europe, Morocco, Algiers, Corsica, India.

40. **Bruchidius rufiventris** (Allard) Comb. Nov.

*Bruchus rufiventris* Allard, 1895, *Ann. Soc. ent. Belg.*, 39:227 (Belgaum). Pic, 1913, *Coleopt. Cat.*, 26:46.

*Distribution*—India.

41. **Bruchidius sahlbergi** Schilsky

*Bruchidius sahlbergi* Schilsky, 1905, *Kaf. Eur.*, 41:nr. 94 (Egypt). Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:173, figs. 92-107.

*Bruchus sahlbergi*, Pic, 1913, *Coleopt. Cat.*, 26:47.

*Distribution*—Egypt, India.

42. **Bruchidius sandali** (Pic) Comb. Nov.

*Bruchus sandali* Pic, 1932, *Ann. Mag. nat. Hist.*, (10)9:331 (Coorg: Fraserpet —Brit. Mus.).

Host—Sandalwood.

*Distribution*—India.

43. **Bruchidius nilue** nom. nov.

*Bruchus stevensi* Pic, 1938, *Ann. Mag. nat. Hist.*, (11)2:400 (Kurseong—Paris Mus.). Name preoccupied vide Pic, 1928:315.

*Distribution*—India.

44. **Bruchidius saundersi** (Jekel)

*Bruchus saundersi* Jekel, 1855, *Ins. Saunders*, 1:6, t. 1, f. 1. Pic, 1913, *Coleopt. Cat.*, 26:47.

*Bruchus cheveroleti* Allard, 1868, *Ann. Soc. ent. Belg.*, 11:93, 108.

*Bruchidius saundersi*, Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:174.

*Distribution*—Egypt, India.

P.U.; F.R.I.

45. **Bruchidius vectabilis** (Gyllenhal) Comb. Nov.

*Bruchus vectabilis* Gyllenhal, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:100 (Bengal). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:227. (Belgaum). Pic, 1913, *Coleopt. Cat.*, 26:55. Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:10, pl. iii, figs. 1-3, (genitalia). Mathur & Singh, 1960, *Indian For. Bull.*, 171(8):34.

*Host*—*Sesbania aculeata*; Rose flowers.

*Distribution*—India.

I.A.R.I; F.R.I.

46. **Bruchidius uberatus** (Fahrreus) Comb. Nov.

*Bruchus uberatus* Fahrreus, 1839, in Schonherr, *Genera et Species Curculionidum*, 5:40. (Africa: Bahr-et-Abiad). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:227 (Belgaum). Pic, 1913, *Coleopt. Cat.*, 26:53. Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:13, pl. iv, figs. 1-2. Mathur & Singh, 1959, *Indian For. Bull.*, 171(4):8, 59.

*Hosts*—*Dalbergia paniculata*; *Prosopis julifera*; *Albizzia stipulata*; *Albizzia odoratissima*; *Arbus precatorius*, *Acacia modesta*.

*Distribution*—India, Africa.

I.A.R.I; F.R.I.

47. **Bruchidius urbans stevensi** (Pic) Comb. Nov.

*Bruchus urbans* var. *stevensi* Pic, 1928, *Bull. Soc. ent. Fr.*, 1928:315. (Sikkim: Gopaldara—Brit. Mus.).

*Distribution*—India.

P.U.; F.R.I.

Genus 3. *Callosobruchus* Pic (1902).

Type species—*Callosobruchus chinensis* (Linnaeus)

48. **Callosobruchus albocallosus** (Pic)

*Bruchus (Callosobruchus) albocallosus* Pic, 1927, *Mel. Exot. ent.*, 48:12 (Indes Merdionales). Pic, 1932, *Ann. Mag. nat. Hist.*, (10)9:329.

*Distribution*—India.

F.R.I.

49. *Callosobruchus analis* (Fabricius)

*Bruchus analis* Fabricius, 1781, *Species Insectorum*. . . . . 1:75 (India Orientalis —Brit. Mus.). Fabricius, 1787, *Mantissa Insectorum*. . . . . 1:42. Fabricius, 1788, *Systema naturae*, 1(4):1735. Olivier, 1790, *Encyclopedie methodique*, 5:200. Fabricius, 1792, *Entomologia Systematica*, 1:371. Fabricius, 1801, *Systema Eleutherorum*, 2:398. Schonherr, 1833, *Genera et Species Curculionidum*, 1:41. Pic, 1913, *Coleopt. Cat.*, 26:15. Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:8, pl. ii, figs. 1-3 (genitalia).

*Callobruchus analis*: Southgate, Howe & Brett, 1957, *Bull. ent. Res.*, 48:79.

*Bruchus jekeli* Allibart, 1847, *Rev. Zoologique*, 1847:15 (China). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:226 (Kanara).

*Bruchus glaber* Allibart, 1847, *Rev. Zoologique*, 1847:16 (China).

Host—*Vigna catang*, also pulses like Mung, Urd, and redgram.

Distribution—China, India.

I.A.R.I.; P.U.; F.R.I. (also under name *B. glaber* Allibart).

50. *Callosobruchus chinensis* (Linnaeus)

*Curculio chinensis* Linnaeus, 1758, *Systema naturae*, ed. 10, 1:386 (China).

*Bruchus chinensis*: Schonherr, 1833, *Genera et Species Curculionidum*, 1:101. Allard, 1895, *Ann. Soc. ent. Belg.*, 39:226 (Belgaum). Felcher & Ghosh, 1921, *Proc. 3rd. ent. Meeting Pusa*, 721, pl. 107, fig. 1. (Life history). Mukerji & Bhuya, 1937, *J. Morph.*, 61:175.

*Callosobruchus chinensis*: Mukerji & Chatterji, 1951, *Indian J. Ent.*, 13:14, pl. 14, figs. 8-11. Luk Yanovika & Ter Minasyan, 1957, *Fn. USSR, Coleoptera: Bruchidae*, 24(1):67, fig. 40. Southgate, 1958, *Bull. ent. Res.*, 49(3):591. Shomar, 1964, *Bull. Soc. Ent. Egypte*, 47:180, figs. 132-143.

*Bruchus pectinicorius* Linnaeus 1767, *Systema naturae*, ed. 10, 1:605.

*Bruchus rufus* Degeer, 1775, *Mem. Ins.*, 5:281, f. 7.

*Bruchus scutellaris* Fabricius, 1792, *Entomologia Systematica*, 1:372.

*Bruchus bistriatus* Fabricius, 1801, *Systema Eleutherorum*, 2:402.

*Bruchus barbicornis* Fabricius, 1801, *Systema Eleutherorum*, 2:403.

*Bruchus elegans* Sturm, 1826, *Cat. meiner Insecten*, Samlung, 1826:103.

*Bruchus adustus* Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 46:227 (1873)

Hosts—Various kinds of pulses, beans, peas etc.

Distribution—Cosmopolitan.

Z.S.I.; I.A.R.I.; P.U.; F.R.I.

51. *Callosobruchus madurensis* Pic

*Bruchus (Callosobruchus) madurensis* Pic, 1927, *Mel. exot. ent.*, 48:12 (India). Distribution—India.

52. *Callosobruchus maculatus* (Fabricius)

*Bruchus maculatus* Fabricius, 1775, *Systema Entomologie*: 65 (America—Univ. Zool. Mus., Copenhagen).

*Callosobruchus maculatus*, Pic, 1913, *Coleopt. Cat.*, 26:33. Hoffmann, 1945, *Fn. France*, 44:89. Southgate, Howe & Brett, 1957, *Bull. ent. Res.*, 48:79. Luk Yanovika & Ter Minasyan, 1957, *Fn. USSR, Coleoptera, Bruchidae*, 24(1):68. Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:182. Arora, Pajni & Singh 1968, *Res. Bull. Punj. Univ.*, 18:501 (abnormal male).

*Bruchus quadrimaculatus* Fabricius, 1792, *Entomologia Systematica*, 1:371

(America—Univ. Zool. Mus. Copenhagen). Mukerji & Hakim Bhuya, 1937, *J. Morph.*, 61:175 (reproductive system).

*Bruchus ornatus* Bohemann, 1829, *Nouv. Mem. Soc. Nat. Moscou*, 1:103. Pic, 1913, *Coleopt. Cat.*, 26:39.

*Bruchus vicinus* Gyllenhal, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:36. Pic, 1913, *Coleopt. Cat.*, 26:36.

*Bruchus ambiguus* Gyllenhal, in Schonherr, 1833 *Genera et Species Curcilioidum*, 1:11, Pic, 1913, *Coleopt. Cat.*, 26:14.

*Bruchus ambiguus* Gyllenhal, in Schonherr, 1833 *Genera et Species Curculionidum*, 5:8. Pic, 1913, *Coleopt. Cat.*, 26:50.

Hosts—Various kinds of pulses, beans etc.

Distribution—Cosmopolitan.

P.U.; F.R.I.

### 53. *Callosobruchus nigripennis* Allard

*Callosobruchus nigripennis* Allard, 1895, *Ann. Soc. ent. Belg.*, 39:226 (Chamba).

*Bruchus nigripennis*: Pic, 1913, *Coleopt. Cat.*, 26:37.

Distribution—India.

F.R.I.

### 54. *Callosobruchus phaseoli* (Gyllenhal)

*Bruchus phaseoli* Gyllenhal, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:37 (Brazil). Pic, 1913, *Coleopt. Cat.*, 26:40. Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:8, pl. i, figs. 5-8. (genitalia).

*Callosobruchus phaseoli*: Luk Yanovika & Ter Minasyan, 1957, *Fn. USSR, Coleoptera, Bruchidae*, 24(1):68.

Hosts—*Dolichos lablab*.

Distribution—Brazil, Italy, Europe, Southern U.S.S.R., India.

I.A.R.I.; F.R.I.

### 55. *Callosobruchus theobromae* (Linnaeus)

*Bruchus theobromae* Linnaeus, 1767, *Systema naturae*, ed. 12, 1:605 (India Orientalis). Fabricius, 1775, *Systema Entomologie*, 65. Linnaeus, 1788, *Systema naturae*, ed. Gmelin, 1(4):1735. Fabricius, 1792, *Entomologia Systematica*, 1:371. Schonherr, 1833, *Genera et Species Curculionidum*, 1:41.

*Bruchus theobromae*: Allard, 1895, *Ann. Soc. ent. Belg.*, 39:226 (Belgaum). Pic, 1913, *Coleopt. Cat.*, 26:52. Mukerji & Chatterji, 1951, *Indian J. Ent.*, 13:6.

Hosts—*Theobromae feminibus*, *Cajanus indicus*.

Distribution—India.

I.A.R.I.; P.U.; F.R.I.

### Genus 4. *Specularius* Bridwell (1938)

Type species—*S. erithrinae* Bridwell 1938

*S. impressithorax* Pic as modified by Declle (1951).

### 56. *Specularius maindroni* (Pic) Comb. Nov.

*Bruchus (Callosobruchus) maindroni* Pic, 1914, *Mel. exot. ent.*, 11:6 (Indes).

Distribution—India.

Genus 5. *Acanthoscelides* Schilsky (1905)  
Type species—*Acanthoscelides obtectus* (Say)

57. ***Acanthoscelides centromaculatus* (Allard)**

*Bruchus centromaculatus* Allard, 1868, *Ann. Soc. ent. Belg.*, 11:93, 107. Pic, 1913, *Coleopt. Cat.*, 26:20.

*Acanthoscelides centromaculatus*: Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:185.

*Distribution*—Egypt, Mexico, Central America, Cuba, India.

F.R.I.

58. ***Acanthoscelides obtectus* (Say)**

*Bruchus obtectus* Say, 1831, *Desc. Curc. N. America*, p. 1. Mathur & Singh, 1959, *Bull. Indian For.*, 171(3):15.

*Acanthoscelides obtectus*: Luk Yanovika & Ter Minosyan, *Fn. USSR.*, Coleoptera, Bruchidae, 24(1):172.

*Bruchus obsoletus* Say, 1831, *Desc. Curc. N. America*, p. 2. Pic, 1913, *Coleopt. Cat.*, 26:37. Hoffmann, *Fn. France*, 44:90. Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:185.

*Bruchus breweri* Crotch, 1867, *Proc. zool. Soc. Lond.*, 1867:389.

*Distribution*—Cosmopolitan.

Genus 6. *Conicobruchus* Decelle (1951)

Type species—*Conicobruchus strangulatus* (Fahrreus)

59. ***Conicobruchus albopubens* (Pic) Comb. Nov.**

*Bruchus albopubens* Pic, 1931, *Melan. exot. ent.*, 57:26.

*Distribution*—India.

P.U.

60. ***Conicobruchus indicus* (Pic) Comb. Nov.**

*Bruchus indicus* Pic, 1909, *Echange*, 25:118. (India—Paris Mus.).

*Bruchus indicus* var. *acanthidis* Pic, 1909, *Echange*, 25:118 (India—Paris Mus.).

*Distribution*—India.

I.A.R.I.; P.U.

Subfamily: Pachymerinae

Genus 7. *Pachymerus* Thunberg (1805)

Type species—*Pachymerus bactris* (Olivier)

61. ***Pachymerus ceylonicus* Pic**

*Pachymerus ceylonicus* Pic, 1924, *L'Echange Revue Linnenne*, 5:25 (Ceylon).

*Distribution*—Sri Lanka.

62. ***Pachymerus indus* (Motschulsky)**

*Caryoborus indus* Motschulsky, 1858, *Etudes Entomologiques*, 7:98. (India Or.).

Schaufuss, 1882, *Ann. Soc. ent. Fr.*, (6)2:85. (Type in Mus. Ludwid Salvator, Geneva).

*Pachymerus indus* Pic, 1913, *Coleopt. Cat.* 26:7.

*Distribution*—India.

F.R.I.

63. **Pachymerus lineaticollis** Pic

*Pachymerus lineaticollis* Pic, 1906, *Bull. Soc. ent. Fr.*, 1906:58 (Cochin-China).

Pic, 1913, *Coleopt. Cat.*, 26:8.

*Distribution*—Indochina, India.

F.R.I.

64. **Pachymerus notativentris** Pic

*Pachymerus notativentris* Pic, 1924, *Mel. exot. ent.*, 42:24 (India).

*Distribution*—India.

Genus 8. *Caryedon* Schonherr (1826)

Type species—*Caryedon gonagra* (Fabricius)

65. **Caryedon acaciae** (Gyllenhal) Comb. Nov.

*Pachymerus acaciae* Gyllenhal, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:97. Hoffmann, 1945, *Fn., France*, 44:95. Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:189, figs. 163-176.

*Distribution*—India, Egypt.

P.U.

66. **Caryedon gonagra** (Fabricius)

*Caryoborus gonagra* Fabricius, 1798, *Entomologia systematica, supplement*, 1798:159 (India). Allard, 1895, *Ann. Soc. ent. Belg.*, 39:225 (Belgaum, Thorawady).

*Bruchus gonagra*: Fabricius, 1801, *Systema Eleutherorum*, 2:399. Gyllenhal, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:129.

*Pachymerus gonagra* Pic, 1913, *Coleopt. Cat.*, 26:7. Mukerji & Chatterji, 1951, *Indian J. Ent.*, 13:19. Mathur & Singh, 1959, *Indian For. Bull.*, 171(4):59. Mathur & Singh, 1960, *Indian For. Bull.*, 171(3):35.

*Caryedon gonagra*: Bridwell, 1929, *Proc. ent. Soc. Wash.*, 31(8):146. Mukerji, Menon & Chatterji, 1957, *Proc. R. ent. Soc. Lond.*, (B) 26:103.

*Caryedon gonagra*, Southgate & Pope, 1957, *Ann. Mag. nat. Hist.*, (12)10:669.

*Caryedon fuscus* Mukerji, Menon & Chatterji, 1957, *Proc. R. ent. Soc. Lond.*, (B) 26:103-106 nec Goeze.

Hosts—This is the true groundnut bruchid, its various records on *Acacia* spp. & Tamarind are considered doubtful and need to be verified.

*Distribution*—India, Africa.

I.A.R.I.; P.U.; F.R.I.

67. **Caryedon languidus** Gyllenhal

*Caryedon languidus* Gyllenhal, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:129 (Calcutta & Manila).

*Mylabris* (= *Bruchus*) *languidus* Baudi, 1886, *Milabridi*, 1886:107.

*Caryoborus languidus*: Allard, 1895, *Ann. Soc. ent. Belg.*, 39:225. Roonwal, Bhashin & Singh, 1956, *Indian For. Bull.*, 171(1):80.

Host—*Cassia auriculata* (seeds).

*Distribution*—India, Philippine Islands.

I.A.R.I.; P.U.; F.R.I.

### 68. **Caryedon tamarindi** (Decaux) Comb. Nov.

*Pachymerus tamarindi* Decaux, 1894, *Le Natural*, 16:129 (India). Pic, 1913, *Coleopt. Cat.*, 26:9. Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:191, figs. 186-202 (Egypt, India).

Host—*Tamarindus indicus*.

*Distribution*—India, Egypt.

Genus 9. *Caryopemon* Jekel (1855)

Type species—*Caryopemon hieroglyphicus* Jekel

### 69. **Caryopemon lucteonotatus** Pic

*Caryopemon lucteonotatus* Pic, 1898, *Bull. Soc. Zool. Fr.*, 23:173 (India—Paris Mus.). Pic, 1913, *Coleopt. Cat.*, 26:9.

*Distribution*—India.

I.A.R.I.

### 70. **Caryopemon thostei** Pic

*Caryopemon thostei* Pic, 1924, *Echange*, 39:30.

*Distribution*—Sri Lanka.

Subfamily: Amblycerinae

Genus 10. *Spermophagus* Schonherr (1833) in part.

### 71. **Spermophagus abdominalis** (Fabricius)

*Bruchus abdominalis* Fabricius, 1781, *Species Insectorum* . . . . , 1:76 (India Or.). Fabricius, 1801, *Systema Eleutherorum*, 2:400 (India). Pic, 1913, *Coleopt. Cat.*, 26:13.

*Spermophagus abdominalis*: Chevrolet, 1877, *Ann. Soc. ent. Fr.*, *Bull.*, (5)7: 135 (Pondicherry). Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:17, pl. iv, fig. 29. (genitalia).

Host—*Hibiscus cannabinus* Linn. (seeds).

*Distribution*—India.

F.R.I.

### 72. **Spermophagus aeneipennis** Pic

*Spermophagus aeneipennis* Pic, 1917, *Mel. exot. ent.*, 26:9 (Ceylon).

*Distribution*—Ceylon.

### 73. **Spermophagus albofasciatus** Gyllenhal

*Spermophagus albofasciatus* Gyllenhal, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:110. Pic, 1913, *Coleopt. Cat.*, 26:58.

*Distribution*—India.

I.A.R.I.; P.U.

74. **Spermophagus albosparsus** Gyllenhal

*Spermophagus albosparsus* Gyllenhal, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:110 (India Or.). Pic. 1913, *Coleopt. Cat.*, 26:58.

*Distribution*—India.

P.U.

75. **Spermophagus bifasciatus** Motschulsky

*Spermophagus bifasciatus* Motschulsky, 1874, *Bull. Soc. Imp. Nat. Moscou*, 39: 250 (1873) (Agra). Pic, 1913, *Coleopt. Cat.*, 26:58.

*Distribution*—India.

76. **Spermophagus ceylonicus** Pic

*Spermophagus ceylonicus* Pic, 1917, *Mel. exot. ent.*, 26:9 (Ceylon).

*Distribution*—Sri Lanka.

77. **Spermophagus convolvuli** Thunberg

*Spermophagus convolvuli*: Thunberg, 1816, *K. Vet. Ak. Handl.*, 37:44, 46 (Sudrussland). Schonherr, 1833, *Genera et Species Curculionidum*, 1:113 (Ceylon). Gyllenhal, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:141. Allard, 1868, *Ann. Soc. ent. Belg.*, 11:87. Schilsky, 1905, *Kaf. Eur.*, 16:E. Pic, 1913, *Coleopt. Cat.*, 26:59. Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:18-19, pl. viii, figs. 1-3. Mathur & Singh, 1960, *India For. Bull.*, 171(5):46.

*Spermophagus guttulatus* Schonherr, 1839, *Genera et Species Curculionidum*, 5:141.

*Host*—*Hibiscus cannabinus* (seeds).

*Distribution*—Ceylon.

I.A.R.I.; F.R.I.

78. **Spermophagus ligatus** Chevrolet

*Spermophagus ligatus* Chevrolet, 1877, *Ann. Soc. ent. Fr. Bull.*, (5)7:134 (Nilgiris). Pic, 1913, *Coleopt. Cat.*, 26:60 (N. India).

*Distribution*—India.

79. **Spermophagus negligens andamanensis** Pic

*Spermophagus negligens* Lombok var. *andamanensis* Pic, 1917, *Mel. exot. ent.*, 26:10 (Andaman Islands).

*Distribution*—India, Andaman Islands.

80. **Spermophagus niger** Motschulsky

*Spermophagus niger* Motschulsky, 1866, *Bull. Soc. Imp. Nat. Moscou*, 39:405 (Ceylon). Pic, 1913, *Coleopt. Cat.*, 26:60.

*Distribution*—Ceylon.

81. **Spermophagus notatipennis** Pic

*Spermophagus notatipennis* Pic, 1932, *Ann. Mag. nat. Hist.*, (10)9:332 (Madras, N. Salem, Jawalagiri, Coorg: Fraserpet—Brit. Mus. & Paris Mus.).

*Distribution*—India.  
F.R.I.

82. **Spermophagus rufipennis** Pic

*Spermophagus rufipennis* Pic, 1917, *Mel. exot. ent.*, 26:9 (Cochin).  
*Distribution*—India.

83. **Spermophagus sophrae** Fahrreus

*Spermophagus sophrae* Fahrreus, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:136 (Chili). Blanchard, in Gay, 1851, *Hist. Chile*, 5:296. Allard, 1895, *Ann. Soc. ent. Belg.*, 39:288. (Dharwar). Pic, 1913, *Coleopt. Cat.*, 26:62 (India; Chili).

Host—Rose Flowers.

*Distribution*—Chili, India.

84. **Spermophagus sublineatus** Bohemann

*Spermophagus sublineatus* Bohemann, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:140 (India Or.). Allard, 1895, *Ann. Soc. ent. Belg.*, 39: 228 (Dharwar, Belgaum). Pic, 1913, *Coleopt. Cat.*, 26:62.

Hosts—*Spomero coccineo*; Rose flowers.

*Distribution*—India.

85. **Spermophagus subsignatus** Gyllenhal

*Spermophagus subsignatus* Gyllenhal, in Schonherr, 1839, *Genera et Species Curculionidum*, 5:139 (India Or.). Allard, 1895, *Ann. Soc. ent. Belg.*, 39: 228 (Belgaum & Burma). Pic, 1913, *Coleopt. Cat.*, 26:62.

*Distribution*—India, Burma.

86. **Spermophagus tessellatus** Motschulsky

*Spermophagus tessellatus* Motschulsky, 1858, *Etudes Entomologiques*, 7:97 (Burma). Pic, 1913, *Coleopt. Cat.*, 26:62. Mukerji & Chatterji, 1951, *Indian J. ent.*, 13:19, pl. vii, figs. 5-6 (genitalia).

*Distribution*—India, Burma.

87. **Spermophagus uniformis** Pic

*Spermophagus uniformis* Pic, 1932, *Ann. Mag. nat. Hist.*, (10)9:332 (Coorg: Fraserpet—Brit. Mus. & Paris Mus.).

*Distribution*—India.

F.R.I.

Genus 11 *Zabrotes* Horn (1885)  
Type Species—*Zabrotes cruciger* Horn

88. **Zabrotes subfasciatus** (Bohemann)

*Spermophagus subfasciatus* Bohemann, in Schonherr, 1833, *Genera et Species Curculionidum*, 1:111 (Brazil). Lucas, 1858, *Ann. Soc. ent. Fr., Bull.*, (3)6:28. Allard, 1868, *Ann. Soc. ent. Fr.*, 11:87. Decaus, 1890, *Et. Ins. nuis.*,

1890:12. Pic, 1913, *Coleopt. Cat.*, 26:62 (Africa, Central America). Lepesme, 1941, *Rev. fr. Ent.*, 8(4):200-201, fig. 1. Shomar, 1964, *Bull. Soc. ent. Egypte*, 47:195, fig. 219.

*Spermophagus (Zabrotes) subfasciatus*: Hoffmann, 1945, *Fn. France*, 44:104.

*Zabrotes subfasciatus*: Luk Yanovica & Ter Minasyan, 1957, *Fn. USSR, Coleoptera, Bruchidae*, 24(1):199.

*Spermophagus musculus* Bohemann, 1833, in Schonherr, *Genera et Species Curculionidum*, 1:112 (Brazil).

*Spermophagus dorsopictum* Lepesme, 1941, *Rev. fr. Ent.*, 8(4):200.

Distribution—Cosmopolitan.

P.U.